

What is claimed is:

1. A method for transmitting control data in a packet data communication system comprising:

when a packet associated control channel is available, transmitting the control data via the packet associated control channel; and

when a packet associated control channel is not available, transmitting the control data via a timeslot allocated for the transmission of the control data.

2. The method of claim 1, wherein transmitting the control data when a packet associated control channel is not available comprises transmitting the control data via a virtual associated control channel that comprises at least one timeslot allocated by a network for transmission of the control data.

3. The method of claim 1, further comprising:
transmitting a request for a persistent, packet associated control channel; and
in response to transmitting the request, receiving an allocation of the timeslot.

4. The method of claim 1, wherein the allocated timeslot is defined by a modulus relationship between an Absolute Frame Number (AFN) associated and an Allocation Divisor 'M' which controls when the mobile station has the right to transmit on the timeslot.

5. The method of claim 1, wherein the allocated timeslot is defined by a mobile station Uplink State Flag (USF) assignment and an assigned timeslot number.

6. The method of claim 1, further comprising starting a timer in response to transmitting the control data in the allocated timeslot.

7. The method of claim 6, further comprising ceasing to use the allocated timeslot upon expiration of the timer.

8. The method of claim 6, wherein the control data comprises first control data and wherein the method further comprises:

when a packet associated control channel is available, transmitting second control data via the packet associated control channel;

5 when a packet associated control channel is not available, transmitting the second control data via a timeslot allocated for the transmission of the control data; and
restarting the timer.

9. The method of claim 6, wherein the control data is transmitted by a mobile station
10 and wherein the method further comprises, when the mobile station does not have any further packet data to transmit prior to the timer expiring, conveying by the mobile station a "keep alive" message for as long as the mobile station intends to utilize the allocated timeslot.

10. A mobile station comprising:

at least one memory device that maintains information concerning a packet associated control channel and a timeslot allocated for transmission of control data when the packet associated control channel is not available; and

5 a processor operably coupled to the at least one memory device that conveys the control data via the packet associated control channel when the packet associated control channel is available and conveys the control data via the timeslot when the packet associated control channel is not available.

10 11. The mobile station of claim 10, wherein, when a packet associated control channel is not available, the processor conveys the control data via a virtual associated control channel that is a portion of the timeslot.

12. The mobile station of claim 10, wherein the processor further conveys a request
15 for a persistent, packet associated control channel and, in response to conveying the request, receives an allocation of the timeslot.

13. The mobile station of claim 10, wherein the at least one memory device maintains the allocated timeslot by maintaining an Absolute Frame Number (AFN) and an
20 Allocation Divisor 'M' which controls when the mobile station has the right to transmit.

14. The mobile station of claim 10, wherein the at least one memory device maintains the allocated timeslot by maintaining a mobile station Uplink State Flag (USF) assignment and an assigned timeslot number.

25 15. The mobile station of claim 10, further comprising a timer and wherein the processor starts the timer when the processor conveys the control data in the allocated timeslot.

30 16. The mobile station of claim 15, wherein the processor ceases use of the allocated timeslot upon expiration of the timer.

17. The mobile station of claim 15, wherein the control data comprises first control data and wherein the processor further transmits second control data via the packet associated control channel when a packet associated control channel is available, transmits the second control data via a timeslot allocated for the transmission of the control data when a packet associated control channel is not available, and, in response to transmitting the second control data, restarts the timer.

18. The mobile station of claim 15, wherein, when the mobile station does not have any further packet data to transmit prior to the timer expiring, the processor conveys a "keep alive" message for as long as the mobile station intends to utilize the allocated timeslot.

19. A method for transferring control data in a packet data communication system comprising:

receiving a request for a persistent, packet associated control channel; and

5 in response to receiving the request, conveying an allocation of a timeslot for use in transmitting the control data when a packet associated control channel is not available

20. The method of claim 19, wherein conveying an allocation of a timeslot comprises, in response to receiving the request, conveying an Absolute Frame Number (AFN) and an Allocation Divisor 'M' which controls when the mobile station has the right to transmit.

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21. The method of claim 19, wherein conveying an allocation of a timeslot comprises, in response to receiving the request, conveying a mobile station Uplink State Flag (USF) assignment and an assigned timeslot number.

15 22. The method of claim 19, further comprising:

when a packet associated control channel is available, receiving the control data via the packet associated control channel; and

when a packet associated control channel is not available, receiving the control data via the timeslot allocated for the transmission of the control data.

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23. The method of claim 22, further comprising, when the control data is received in the allocated timeslot, starting a timer.

24. The method of claim 23, wherein the request is received from a first mobile station and wherein the method further comprises holding off re-allocation of the timeslot to a second mobile station until expiration of the timer.

25. The method of claim 23, wherein the control data comprises first control data and wherein the method further comprises:

30 when a packet associated control channel is available, receiving second control data via the packet associated control channel;

when a packet associated control channel is not available, receiving the second control data via a timeslot allocated for the transmission of the control data; and
in response to receiving the second control data, restarting the timer.

26. A network controller comprising a processor that receives a request for a persistent, packet associated control channel and, in response to receiving the request, conveys an allocation of a timeslot for use in transmitting control data when a packet associated control channel is not available

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27. The network controller of claim 26, wherein the processor conveys an allocation of a timeslot by conveying an allocation of a timeslot comprises, in response to receiving the request, conveying an Absolute Frame Number (AFN) and an Allocation Divisor 'M' which controls when the mobile station has the right to transmit.

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28. The network controller of claim 26, wherein the processor conveys an allocation of a timeslot by conveying a mobile station Uplink State Flag (USF) assignment and an assigned timeslot number.

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29. The network controller of claim 26, wherein, when a packet associated control channel is available, the processor receives the control data via the packet associated control channel and when a packet associated control channel is not available, the processor receives the control data via the timeslot allocated for the transmission of the control data.

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30. The network controller of claim 29, further comprising a timer and wherein the processor starts the timer when the control data is received in the allocated timeslot.

31. The network controller of claim 30, wherein the request is received from a first mobile station and wherein the processor holds off re-allocation of the timeslot to a second mobile station until expiration of the timer.

32. The network controller of claim 30, wherein the control data comprises first control data and wherein the processor further, when a packet associated control channel is available, receives second control data via the packet associated control channel, when a packet associated control channel is not available, receives the second control data via a

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timeslot allocated for the transmission of the control data, and, in response to receiving the second control data, restarts the timer.